hp StorageWorks Enterprise Virtual Array Third Party Rack Support

First Edition (May 2004)

Part Number: EK-3RSUP-TE

This document is intended as a reference guide for customers wishing to install HP StorageWorks equipment into racks not currently supported by the HP StorageWorks product line.

For the latest version of this Reference Guide and other HP StorageWorks documentation, access the HP storage web site at: http://www.hp.com/country/us/eng/prodserv/storage.html.

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About this document

This section describes the content reflected in this document, including:

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■ Intended audience, page 3

Reference guide

This Reference Guide covers the following major topics:

■ Rack standards, page 4

■ Glossary, page 8

Intended audience

This reference guide is intended for use by those wishing to install HP StorageWorks equipment into racks not currently supported by the HP StorageWorks product line. Users should be able to determine if the rack they intend to install components into meets the physical requirements necessary for a successful installation of their storage devices.

Rack standards

HP StorageWorks equipment installed in racks not currently supported by the HP StorageWorks product line must meet the following standards. If the rack doesn't meet the following criteria, contact technical support at www.hp.com.

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Rack specifications and dimensions

HP StorageWorks equipment supports 4-post racks only. Racks should be EIA-310-D compliant for 19 inch rack mountable components (see Table 1).

Table 1: EIA-310-D rack specifications (see Figure 1)

Internal clearance between rails	Minimum 450 mm (17.7 in)
Centerline to Centerline of mounting holes locations	465 mm ± 1.5 mm (18.3 in ± 0.5 in)
Front rail opening for rack mounted panels	486.65 mm (19.16 in)

The internal clearance between rails should be maintained from the front rails to the rear rails. Racks with the minimum required space may need additional adjustment of rail kit hardware.

Table 2: Rack dimensions (see Figure 1)

Rail to rail clearance (front-to-back mounting depth)	Minimum 700.02 mm (27.56 in) Maximum 739.14 mm (29.1 in)
Field Replaceable Unit (FRU) Space	186 mm (7.32 in)
Front vertical rails clearance	482.6 mm wide (19.0 in) 19 mm depth (0.75 in)
Bracket Hardware Clearance	Minimum 530.86 mm (20.9 in) Maximum 643.16 mm (25.32 in) Width 494.03 mm (19.45 in)

Note: Racks with adjustable vertical mounting rails must be positioned as to not interfere with component and mounting hardware space.
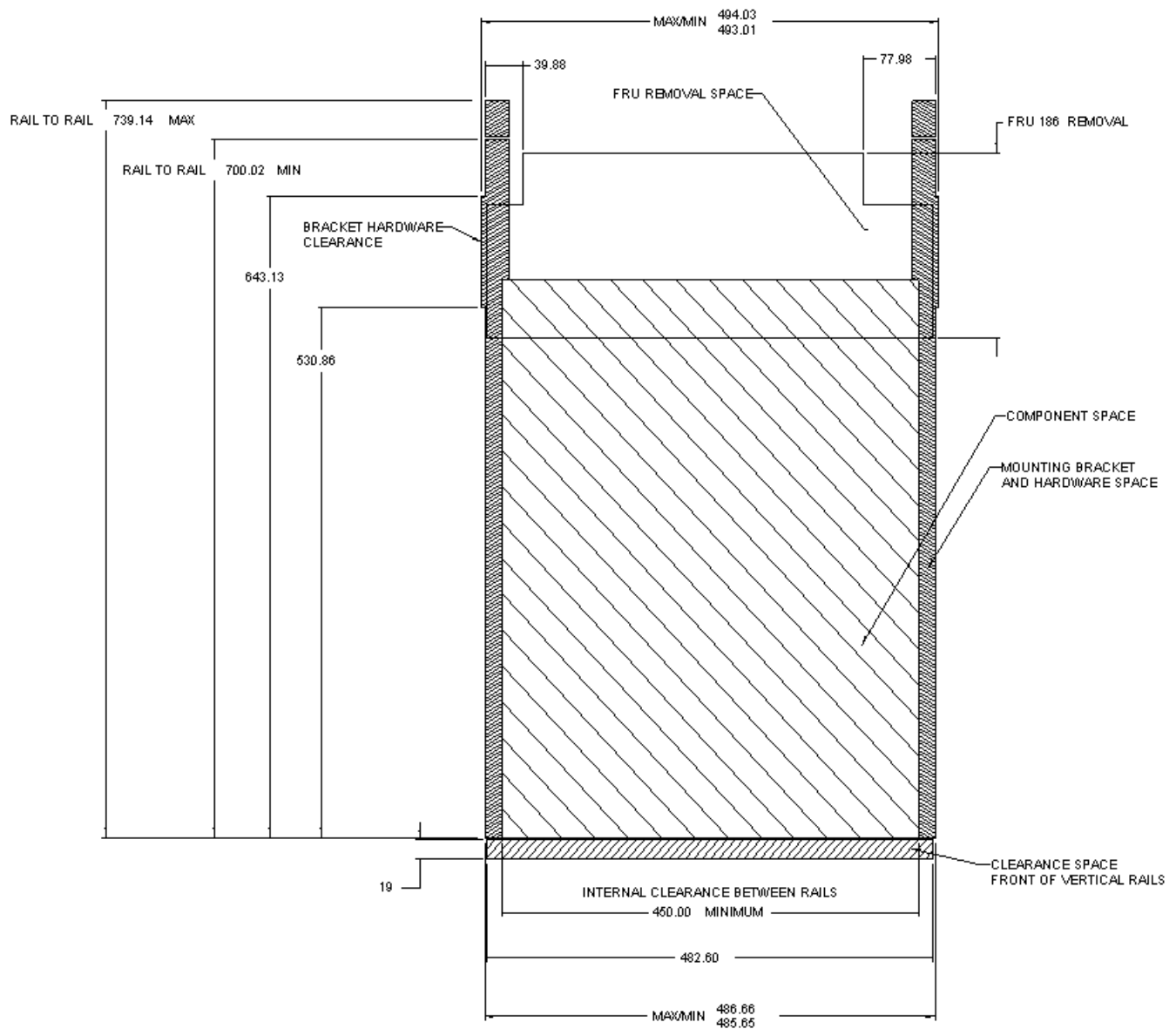
Figure 1: Rack specifications and dimensions

Column hole type

HP rack-mounting kits support non-threaded 9.5 mm square (Figure 2) and 7.1 mm round (Figure 3) holes.
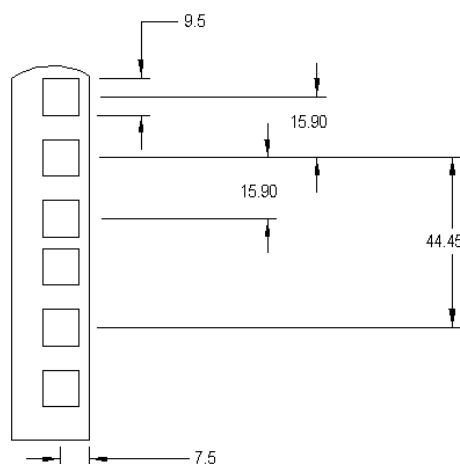
Figure 2: Square mounting holes
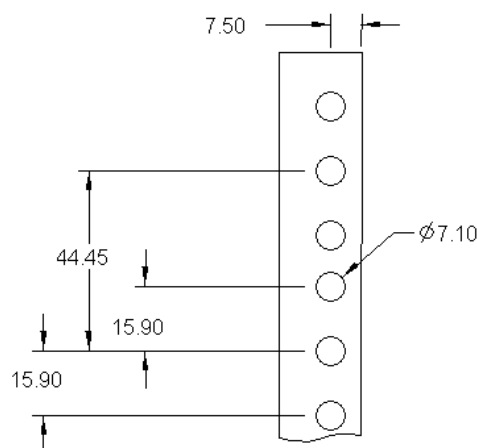
Figure 3: Round mounting holes

Airflow and cooling

All intake air for the rack should be from the front. Exhaust of heated air may be to the back, top, bottom, or sides of the rack provided there is no availability of direct recirculation of heated exhaust air to the front of the rack.

Table 3: Airflow

Intake	Front
Output	Top Bottom Rear (with qualifications)
Vented door	62% open area (minimum)
Option to remove door	

Racks without fully enclosed air systems may be used, but care should be taken to ensure heated exhaust is not recirculated through the front of the rack. Filler panels are required to prevent recirculation of heated airflow through storage devices.

Power

HP StorageWorks equipment installed in racks not currently supported by the HP StorageWorks product line must meet the following power requirements.

Table 4: Power requirements

	60Hz	50Hz
Rated input voltage	208–240 VAC	208–240 VAC
Rated input current	24 Amp	24 Amp
Plug type	NEMA L6-30P	IEC-309: 32 Amp, 3 Pin
Power cord	10 AWG, 3 Conductor, Type SJ, SJP, SJE or SJOO	4 mm Square Harmonized 3 Conductor

Glossary

This glossary defines terms used in this guide or related to this product and is not a comprehensive glossary of computer terms.

Mounting Bracket
Brackets intended to be mounted to the vertical mounting rails. Mounting brackets are used to support the equipment being installed.

Rack
A rack is a free standing mounting structure used to mount electronic equipment. Typical racks are intended as static load stationary structures, and may have two or four vertical mounting rails. HP does not currently support installation of HP StorageWorks equipment in racks having only two vertical mounting rails.

U space
1 U is defined as 1.75, 45 mm space centered around three mounting hole locations.

Vertical Mounting Rail
Vertical mounting rails are the structural members of racks used for mounting components and brackets. Typical vertical mounting rails fall into two classifications, Standard U and 25 mm configurations. Both configurations are as specified in the EIA standard 310-D, Cabinets, Rack and Associated Equipment as published by the Electronic Industries Association. Only Standard U configurations are supported for mounting HP Storage equipment.

Of the Standard U configurations, vertical mounting rails typically have three types of mounting holes used to mount equipment hardware; square holes, round holes, and threaded holes. Threaded holes are typical of Telco racks and are not supported for installation of HP StorageWorks equipment.